

Unit 2 Creating Systems to Manage Information 2019



**Level 3 National in
Information Technology**

**Additional Sample Assessment
Material**

**Part A
Example Solution**

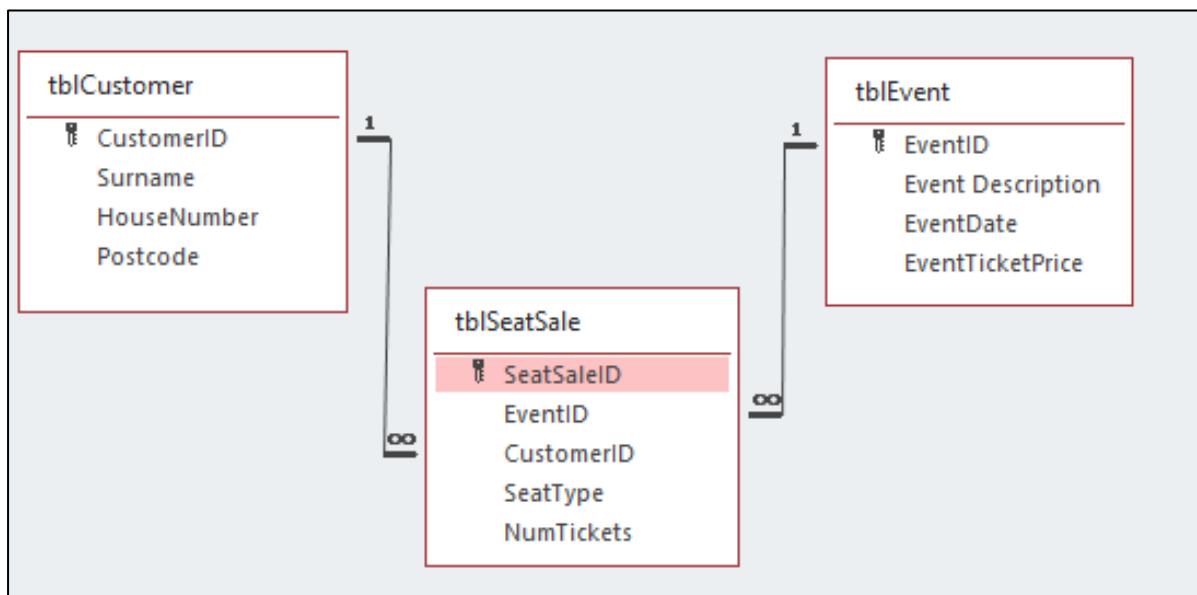
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Introduction

This solution shown is **one** example only. It is important to read the guidance with each activity. No assumption is made that a method that differs from the solution shown is incorrect.

Activity 1 Database Relationship Screenprint



Activity 2 – Table Structures and Validation

Table Structures

Field Name	Data Type
CustomerID	Number
Surname	Short Text
HouseNumber	Short Text
Postcode	Short Text

Field Name	Data Type
EventID	AutoNumber
Event Description	Short Text
EventDate	Date/Time
EventTicketPrice	Currency

Field Name	Data Type
SeatSaleID	AutoNumber
EventID	Number
CustomerID	Number
SeatType	Short Text
NumTickets	Number

Table Validation

Presence and Length Check

Surname	Short Text
General <input type="radio"/> Lookup Field Size: 20 Format Input Mask Caption Default Value Validation Rule: Is Not Null Validation Text: You must enter the customer's surname	

Value Lookup or Range Check

NumTickets	Number
General <input type="radio"/> Lookup Field Properties Field Size: Long Integer Format Decimal Places: Auto Input Mask Caption Default Value: 0 Validation Rule: Between 1 And 8 Validation Text: Must be at least 1 ticket bought and no more than 8	

Table Lookup

tblSeatSale	Field Name	Data Type	Description
	SeatSaleID	AutoNumber	
	EventID	Number	<input type="button" value="▼"/> Field Properties General <input type="radio"/> Lookup Display Control: Combo Box Row Source Type: Table/Query Row Source: SELECT [tblEvent].[EventID], [tblEvent].[Event Description], [tblEvent].[Event Date], [tblEvent].[Event Time] FROM [tblEvent] Bound Column: 1 Column Count: 4 Column Heads: No Column Widths: 1.35cm;4.974cm;1.799cm;2.408cm List Rows: 16 List Width: 10.529cm Limit To List: Yes

Format Check

tblCustomer	Field Name	Data Type	
	HouseNumber	Short Text	
	Postcode	Short Text	<input type="button" value="▼"/> Field Properties General <input type="radio"/> Lookup Field Size: 7 Format Input Mask: >LL0\ OLL Caption Default Value Validation Rule: Is Not Null Validation Text: You must enter the customer's postcode Required: No

Activity 3

Queries

Query a

Create a query to display an alphabetically sorted list of the events running on the 20th and 21st of December. It must show event description and event ticket price only.

The screenshot shows two windows for a query named 'qry_AlphabeticalEvents'.

Query Design View:

- Table:** 'tblEvent' is selected.
- Fields:** 'Event Description', 'EventTicketPrice', and 'EventDate' are listed.
- Sort:** 'Event Description' is set to 'Ascending'.
- Criteria:** 'EventDate' is set to 'Between #20/12/2019# And #21/12/2019#'.
The 'Show' section has checkboxes for 'Event Description' (checked) and 'EventTicketPrice' (checked).

Query Results View:

Event Description	EventTicketPrice
Sing A Long Christmas Extravaganza	£10.00
The Polar Express Extravaganza	£10.00
*	£0.00

Query b

Create a query that will calculate:

- the number of table tickets sold
- the income the tickets sold would generate.

Display:

- the event description
- the number of table seat tickets sold
- the income generated.

The screenshot shows the Microsoft Access Query Design View window titled "qry2Income".

Relationship Diagram:

- tblEvent (left) is connected to tblSeatSale (right) via a one-to-many relationship (1 to infinity).
- tblEvent has fields: EventID, Event Description, EventDate, EventTicketPrice.
- tblSeatSale has fields: SeatSaleID, EventID, CustomerID, SeatType, NumTickets.

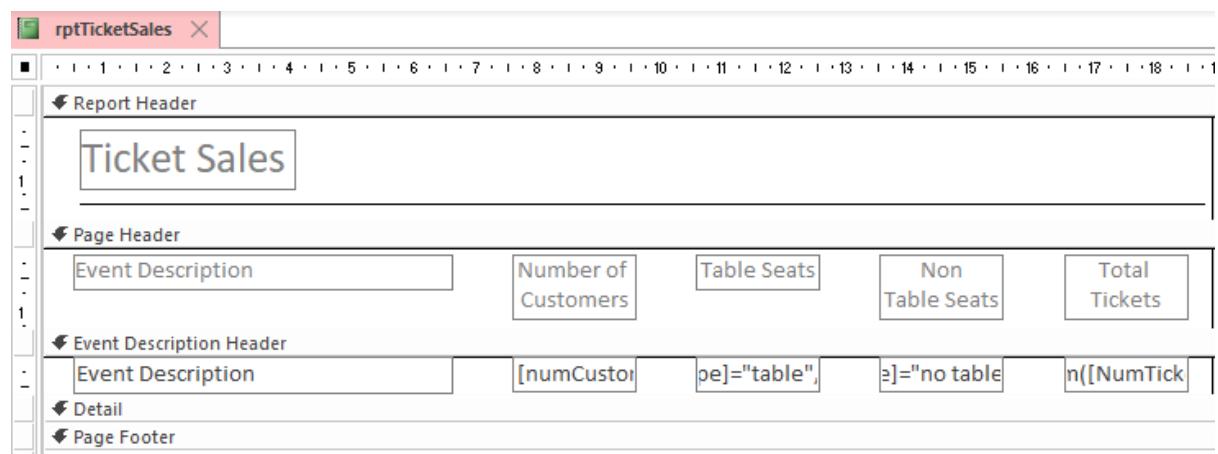
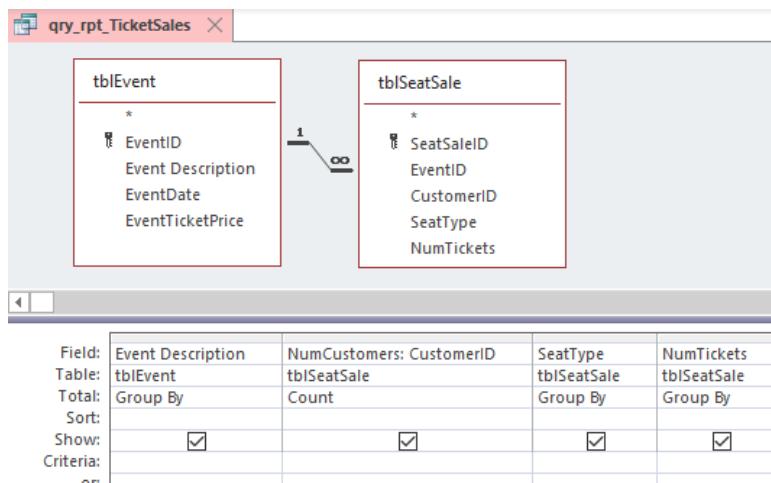
Query Properties Grid:

Field:	Event Description	Table:	tblEvent	Total:	Sum	Expression:	EventTicketPrice	SeatType
Table:	tblEvent	tblSeatSale					tblEvent	tblSeatSale
Sort:	Group By					Group By		Group By
Show:	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Criteria:	or:							"table"

Result Data View:

Event Description	TableTicketsSold	Income
Christmas Songtime	2	£20.00
Home Alone	4	£50.00
The Polar Express	4	£60.00

Report Example 1



Calculation for table seats

=Sum(IIf([seattype] = "table", [numtickets], 0))

Calculation for no table seats

=Sum(IIf([seattype] = "no table", [numtickets], 0))

Calculation for total tickets

=Sum([NumTickets])

Many different ways to achieve. Could use grouping on Event Description etc. Any method that shows what we want is valid.

The screenshot shows a Microsoft Access report window titled "rpt_TicketSales". The report has a light gray background and a white header section. The header contains the title "Ticket Sales" in a dark gray font. Below the header is a table with five columns: "Event Description", "Number of Customers", "Table Seats", "Non Table Seats", and "Total Tickets". The table data is as follows:

Event Description	Number of Customers	Table Seats	Non Table Seats	Total Tickets
Christmas Songtime	2	2	1	3
Home Alone	2	4	8	12
The Polar Express	2	4	2	6

Presentation of report cannot be marked from screenprint. Need to see actual report. Report here for illustration purposes only.

Example 2

The screenshot shows the report structure with the following components:

- Report Header:** Contains a placeholder for the title.
- Page Header:** Contains a placeholder for the event description.
- EventID Header:** Contains two text boxes: "Number of Customers:" with the formula `=Count([customerID])` and "Total Tickets Sold" with the formula `=Sum([NumTickets])`. It also contains two buttons: "Seat Type" and "Tickets Sold".
- Detail:** A table with two columns: "SeatType" and "NumTickets".
- Page Footer:** Contains a placeholder for the footer information.
- Report Footer:** Contains a placeholder for the report footer information.

The generated report output displays three sections of ticket sales data:

Christmas Songtime

Number of Customers:	2
Total Tickets Sold	3
Seat Type	Tickets Sold
No Table	1
Table	2

The Polar Express

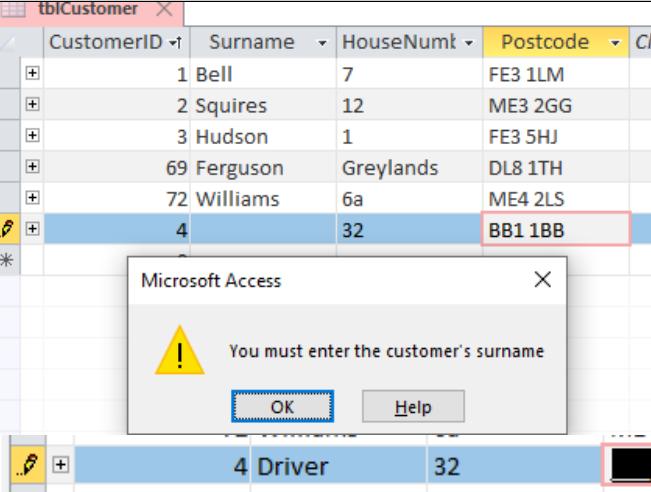
Number of Customers:	2
Total Tickets Sold	6
Seat Type	Tickets Sold
No Table	2
Table	4

Home Alone

Number of Customers:	2
Total Tickets Sold	12
Seat Type	Tickets Sold
No Table	8
Table	4

Activity 4 - Testing

Screenprints may be on the small side here. Learners can put the screenshots after the table or use A3.

Test No	type test	Add suitable test data	Add the results you would expect to get from a fully working system	Add screenprint(s) of the results of this test carried out on your database. Ensure you show the test data used in the screenprint(s)	Only complete this column if the results are not as expected • Explain the error If you correct the error explain how you have done it including a screenprint
1	R	CustomerID:4 Surname: blank HouseNumber:32 Postcode: BB1 1BB	An error message telling the user the surname is required		
2	R	CustomerID:4 Surname:Driver HouseNumber:32 Postcode 11B B11	No error message but the user will not be able to add a character where a number should be or a number where a character should be. The character will not be input		

3	X	SeatSaleID:Autonumber EventID:4 CustomerID:69 SeatType: Table NumTickets:1	Error message saying they must select an item from the list.	<p>The screenshot shows a Microsoft Access table named 'tblSeatSale' with columns: SeatSaleID, EventID, CustomerID, SeatType, NumTickets, and Click to Add. A new row is being inserted with values: 9, 4, 69, Table, 1, and (New). The 'EventID' field has a red border around its dropdown menu, indicating an error. A validation dialog box titled 'Microsoft Access' displays the message: 'The text you entered isn't an item in the list. Select an item from the list, or enter text that matches one of the listed items.' with an 'OK' button.</p>	
4	R	SeatSaleID:Autonumber EventID:1 CustomerID:1 SeatType:both NumTickets:1	Error message saying they must select an item from the list.	<p>The screenshot shows a Microsoft Access table named 'tblSeatSale' with columns: SeatSaleID, EventID, CustomerID, SeatType, NumTickets, and Click to Add. A new row is being inserted with values: 8, 1, 1, both, 1, and (New). The 'SeatType' field has a red border around its dropdown menu, indicating an error. A validation dialog box titled 'Microsoft Access' displays the message: 'The text you entered isn't an item in the list. Do you want to edit the items in the list?' with 'Yes' and 'No' buttons.</p>	
5	X	SeatSaleID:Autonumber EventID:1 CustomerID:1 SeatType:Table NumTickets:0	Error message telling the user the input has to be between 1 and 8	<p>The screenshot shows a Microsoft Access table named 'tblSeatSale' with columns: SeatSaleID, EventID, CustomerID, SeatType, NumTickets, and Click to Add. A new row is being inserted with values: 7, 1, 1, Table, 0, and (New). The 'NumTickets' field has a red border around its input field, indicating an error. A validation dialog box titled 'Microsoft Access' displays the message: 'Must be at least 1 ticket bought and no more than 8' with 'OK' and 'Help' buttons.</p>	

6	X	SeatSaleID:Autonumber EventID:1 CustomerID:1 SeatType:Table NumTickets:9	Error message telling the user the input has to be between 1 and 8	<p>The screenshot shows a Microsoft Access database window titled "tblSeatSale". A new record is being inserted with the following values:</p> <table border="1"> <thead> <tr> <th>SeatSaleID</th> <th>EventID</th> <th>CustomerID</th> <th>SeatType</th> <th>NumTickets</th> </tr> </thead> <tbody> <tr><td>1</td><td>1</td><td></td><td>1 Table</td><td>2</td></tr> <tr><td>2</td><td>1</td><td></td><td>2 No Table</td><td>1</td></tr> <tr><td>3</td><td>2</td><td></td><td>3 Table</td><td>4</td></tr> <tr><td>4</td><td>2</td><td></td><td>72 No Table</td><td>2</td></tr> <tr><td>5</td><td>3</td><td></td><td>1 Table</td><td>4</td></tr> <tr><td>6</td><td>3</td><td></td><td>69 No Table</td><td>8</td></tr> <tr><td>7</td><td>1</td><td></td><td>1 Table</td><td>9</td></tr> <tr> <td>*</td><td>(New)</td><td></td><td></td><td>0</td></tr> </tbody> </table> <p>A validation error message box is displayed in front of the table, stating: "Must be at least 1 ticket bought and no more than 8".</p>	SeatSaleID	EventID	CustomerID	SeatType	NumTickets	1	1		1 Table	2	2	1		2 No Table	1	3	2		3 Table	4	4	2		72 No Table	2	5	3		1 Table	4	6	3		69 No Table	8	7	1		1 Table	9	*	(New)			0	
SeatSaleID	EventID	CustomerID	SeatType	NumTickets																																														
1	1		1 Table	2																																														
2	1		2 No Table	1																																														
3	2		3 Table	4																																														
4	2		72 No Table	2																																														
5	3		1 Table	4																																														
6	3		69 No Table	8																																														
7	1		1 Table	9																																														
*	(New)			0																																														

Activity 5 – Evaluation

No evaluation example included as these can end up becoming the 'only way' candidates evidence this activity.